

ABSTRACT OF THE DISCLOSURE

An adaptive quality control loop for link rate adaptation that adaptively selects optimal channel condition thresholds in real-time without measuring all the factors that affect selecting channel condition thresholds. The adaptive quality control loop involves adjusting the channel condition thresholds with variable up and down steps based on target quality metrics along with measurements such as error detection results, relative frequencies of visiting each modulation and/or coding schemes (also referred to as "MCS levels") and transmitted data rates. In one embodiment, the adaptive quality control loop comprises the step of adjusting a channel condition threshold based on a error detection result for a data packet transmission using a variable step. The channel condition threshold is associated with an MCS level used in the data packet transmission.